DETAILED ACTION

This Office Action is responsive to the Applicant's communication filed February 12, 2010. In virtue of this communication and the amendment concurrently filed:

- claims 1-18 were previously pending;
- claims 2-3 and 8-17 were cancelled by the amendment;
- claims 19-22 were added by the amendment; and thus
- claims 1, 4-7, and 18-22 are now pending in the instant application.

Response to Arguments

1. Applicant's arguments filed February 12, 2010 have been fully considered but they are not persuasive.

The Applicant's first argument (page 10, lines 3-22 of the Remarks) states that the first face of the sealing part is not "axially inclined" as recited in claim 1. The Applicant's definition of "inclined", however, is not the broadest reasonable interpretation. The same source cited by the Applicant also defines inclined as "tending in a direction that makes an angle with anything else". Further, the Applicant's own definition of "deviating in direction from the horizontal or vertical" also applies to the sealing part of Harris (US 5,793,143), as lying in the horizontal plane does deviate in direction from the vertical plane. Thus, "inclined" does not exclude components disposed at a ninety degree angle, and this argument is unpersuasive.

The Applicant's second argument (page 11, lines 1-10) states that Harris does not disclose "a second face extending from the first face parallel to the axis". However,

figure 1 of Harris shows that each of the tabs have multiple sides or faces. Counting the radially outermost face as the first face, either of the sides extending in the radial direction read on the second face as claimed.

The Applicant's third argument (page 11, line 11 to page 12, line 10) states that the second reference applied, Vasilescu (US 2003/0030334 A1), does not disclose certain features of claim 1. Since this reference was primarily applied to reject claim 13, now cancelled, these rejections have been withdrawn.

The Applicant's fourth argument (page 12, line 11 to page 13, line 7) states that the amended text of claim 6 is not disclosed by Harris. While this is true, new grounds of rejection are applied as stated below.

The Applicant's last argument (page 13, lines 8-15) states that the amended text of claim 7 is not disclosed by Harris. While this too is true, Vasilescu discloses fan blades which, in combination with the invention of Harris, do read on the new limitations.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4-5, 18-19, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Harris et al. (US 5,793,143), hereinafter referred to as "Harris".

With regard to claim 1, Harris discloses a rotor assembly [10] (see col. 2, lines 8-14; and figure 1 for all numerical references unless otherwise stated) mounted to rotate around an axis of rotation (dashed line through the center of figure 1) and comprising:

two magnet wheels [12, 14] separated by an axial spacing and arranged opposite each other (see col. 2, lines 14-19), each of the wheels [12, 14] comprising an end shield [32] substantially perpendicular to the axis (see figure 2B and col. 2, lines 30-35) and claws [20, 22] extending axially from the end shield [32] towards the other wheel [12, 14];

the end shield [32] of one of the magnet wheels [12, 14] comprising an axial face opposite the other wheel [12, 14];

the claws [20, 22] of one wheel [12, 14] being attached to the end shield [32] by respective bases mutually separated by peripheral spaces; and

a fan [24, 28] (see col. 2, lines 20-24) positioned on the axial face of the end shield of one of the wheels [12, 14] opposite the other wheel (see figure 1), so as to axially seal at least partly one of the peripheral spaces (The sealing parts [36, 50] are described in col. 2, lines 47-51 and col. 3, lines 15-20);

the fan [24, 28] comprising a plate substantially perpendicular to the axis (the flat bases of the fans are clearly shown in figure 1) and attached to the end shield (the assembled rotor assembly is clearly shown in figure 5), and blades [40] protruding from the plate (see col. 2, line 56);

the plate having a sealing part [36, 50] axially sealing at least one of the peripheral spaces (see col. 2, lines 47-51 and col. 3, lines 15-20);

the plate of the fan [24, 28] comprising a substantially annular solid part (see figure 1);

the sealing part [36, 50] comprising an axial relief in the form of a thin tab [36, 50] comprising a first face (this is the radially outermost face of the sealing part; as seen in the figures) axially inclined from the solid part of the plate at the side of the claws (The claws and sealing parts extend in the axial direction, which is inclined from the radial direction of the plate.).

With regard to claim 4, Harris discloses the rotor assembly according to claim 1, as stated above, wherein the tab further comprises a second face (the sides facing the circumferential direction) extending from the first face parallel to the axis (see figure 1), and wherein the axial relief (the sealing parts extend in the axial direction, as shown in the figures) extends from the plate between the claws (see col. 2, lines 47-51).

With regard to claim 5, Harris discloses the rotor assembly according to claim 4, as stated above, wherein the axial relief [36, 50] is shaped so as to serve as a fixing clip for the fan [24, 28] on the corresponding magnet wheel [12, 14] (see col. 2, line 51; The interference fit described allows the axial reliefs, or sealing parts, to fix the fan to the magnet wheels.).

With regard to claim 18, Harris discloses an alternator or alternator-starter for an automobile vehicle (see col. 1, lines 9-15), comprising a rotor assembly according to claim 1, as stated above.

With regard to claim 19, Harris discloses the rotor assembly according to claim 1, as stated above, wherein the first face (the outermost radial surface) of the tab [36, 50] extends obliquely (oblique is a synonym for "inclined") from the solid part axially and radially outwardly from the axis of rotation (see figure 1; the tab extends, has a length, in both the radial and axial directions).

With regard to claim 21, Harris discloses the rotor assembly according to claim 4, as stated above, wherein the claws [20, 22] have radially outer surfaces defining the diameter of the rotor assembly (see figure 1); and wherein the second face (the sides facing the circumferential direction) of the tab [36, 50] lies in the extension of the outer faces of two claws [20, 22] and partially seals the space separating these two outer faces over a short axial length (both the first and second faces of the tabs lie between the claws and partially seal the space).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of Vasilescu et al (US 2003/0030334 A1), hereinafter referred to as "Vasilescu".

With regard to claim 7, Harris discloses the rotor assembly according to claim 4, as stated above, wherein the fan [24, 28] is molded (see col. 2, lines 40-42), except that Harris does not expressly disclose a fan blade extending along the first face of the tab.

Vasilescu discloses a rotor assembly [42] (see figures 2 and 7) comprising a fan [48] positioned on the axial face of the end shield of one of the wheels opposite the other wheel (see [0052], lines 1-7), wherein the fan has a fan blade extending along the gap between claws [44] of the rotor (see figures 2-5).

One of ordinary skill in the art would have recognized that the fan blades of Vasilescu are known equivalents for the fan blades of Harris. Thus it would have been obvious to one of ordinary skill in the art when the invention was made to substitute one known element, fan blades extending in the axial direction between claws, for another known equivalent element, the fan blades of Harris, leading to the predictable result of the fan blades extending along the first face of the tab.

6. Claims 6, 20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of Buening et al (US 6,781,262 B2), hereinafter referred to as "Buening".

With regard to claim 6, Harris discloses the rotor assembly according to claim 4, as stated above, except that Harris does not expressly disclose that the solid part has a radially outer edge in which is hollowed out at least one recessed zone, the sealing part extending from a base of the recessed zone; wherein a central web extends axially parallel to the axis of rotation from the base of the of the recessed zone; wherein two

lateral webs link opposite lateral edges of the central web to the lateral edges of the first and second faces of the tab, and wherein the central web is narrower than the first and second faces of the tab such that the lateral webs diverge from the central web to the first and second faces.

Buening discloses a rotor assembly similar to that of claim 4, wherein the solid part [340] has a radially outer edge in which is hollowed out at least one recessed zone [390], the sealing part [300] extending from a base of the recessed zone (see figures 3-5 and columns 3-4);

wherein a central web (see figure 5; the webs extend behind the sealing parts [300]) extends axially parallel to the axis of rotation from the base of the of the recessed zone (see figure 5); wherein two lateral webs link opposite lateral edges of the central web to the lateral edges of the first [310]and second [320/330] faces of the tab (see figures 4 and 5), and wherein the central web is narrower than the first and second faces of the tab such that the lateral webs diverge from the central web to the first and second faces (see figure 5).

One of ordinary skill in the art would have recognized that the sealing part of Harris would be improved by adding webs, thereby strengthening the sealing part. Thus, it would have been obvious to one of ordinary skill in the art when the invention was made to use the known technique of adding webs to the underside to improve the known sealing parts, to achieve the predictable result of providing additional strength and structural rigidity.

With regard to claim 20, Harris discloses the rotor assembly according to claim 1, as stated above, except that Harris does not expressly disclose that the first face of the tab has concave curvature turned towards the axis of rotation.

Buening discloses that the first face [310] of the tab [300] has concave curvature turned towards the axis of rotation (see figure 4).

However, it would have been obvious to one of ordinary skill in the art to form the tabs along the curvature of the teeth, for the purpose of creating a smooth surface to reduce drag/wind resistance, since it has been held that a mere change in shape of a particular component of a device is a matter of design choice involving only routine skill in the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

With regard to claim 22, Harris discloses he rotor assembly according to claim 4, as stated above, except that Harris does not expressly disclose that the tab carries an axial reinforcing rib extending from the plate along the first and second faces of the tab.

Buening discloses a rotor assembly similar to that of claim 4, wherein the tab [300] carries an axial reinforcing rib (see figure 5; the ribs extend behind the sealing parts [300]) extending from the plate along the first [310] and second [320/330] faces of the tab (see figure 5).

One of ordinary skill in the art would have recognized that the sealing part of Harris would be improved by adding ribs, thereby strengthening the sealing part. Thus, it would have been obvious to one of ordinary skill in the art when the invention was made to use the known technique of adding ribs to the underside to improve the known

sealing parts, to achieve the predictable result of providing additional strength and structural rigidity.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Andrews whose telephone number is (571)270-7554. The examiner can normally be reached on Monday through Thursday between the hours of 7:30 and 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen Leung can be reached at (571)272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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